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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/577,734	05/23/2000	Kouji Takagi	13624	3883

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Paul J Esatto Jr  
Scully Scott Murphy & Presser  
400 Garden City Plaza  
Garden City, NY 11530

EXAMINER

DUONG, THOI V

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 01/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/577,734

Applicant(s)

TAKAGI, KOUJI

Examiner

Thoi V Duong

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 May 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \*   c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: In page 1, line 8, "feedthrough" should be "feedthrough" and in Fig. 1A, "A" is missing at the arrow as indicated in page 16, line 6.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroha et al. (USPN 6,028,650).

Kuroha discloses a liquid crystal display (LCD) panel comprising a plurality of pixels which are disposed in a matrix having rows and columns and each of which has at least a thin film transistor (TFT) and a pixel electrode; a plurality of gate signal lines which extend from a gate input portion disposed along a side of said liquid crystal display panel and each of which is coupled with said TFT's in a row of said matrix; auxiliary capacitor portions each additionally coupled with a pixel electrode of one of said pixel, wherein capacitance of each of the auxiliary capacitor portions is determined by an overlapped area of an opposing portion between a pixel electrode of a pixel and a gate signal line coupled with an adjacent pixel via an interlayer insulating film and a

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passivation layer between said pixel electrode and said gate signal line. As shown in Figs. 4, 5A, 5B, and 5C, the overlapped areas are gradually reduced by changing the width of the pixel electrodes while the width of each gate signal line is constant as the distance from the gate line driving circuit is increased. As a result thereof, the capacitance of the auxiliary capacitor portions of the same gate line becomes smaller as the distance from the gate signal input portion becomes larger. Kuroha further teaches that in order to reduce the fluctuation of the feed-through voltage array, the resistances of the gate lines can be reduced. For example, the width of the gate lines can be reduced, and also, the gate lines can be made of material such as aluminum or gold having a low resistance; and also, if the width of the gate lines is increased, the numerical aperture is reduced (col. 3, lines 19-30). Thus, it would have been obvious to one having skill in the art at the time the invention was made to reduce the width of the gate signal line as the distance from the gate input portion increases as taught by Kuroha so as to reduce capacitance of the auxiliary capacitor portions, to increase numerical aperture as well as to achieve uniform feed-through voltage in the liquid crystal panel.

4. Claims 2, 3, 6, 7, 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroha et al. as applied to claims 1, 4, 5 above, and further in view of Taniguchi et al. (USPN 6,334,689 B1).

Kuroha, as modified, discloses the lcd device of the instant invention, which also includes a common counter electrode CE formed on an opposing substrate 8 and liquid crystal 9 is inserted into a gap between the passivation layer 7 and the common counter

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electrode CE as shown in Figs. 4 and 5A, except for the backlight for illuminating the LCD panel. As shown in Figs. 2 and 3 Prior Art, Taniguchi discloses a backlight portion employed in a conventional liquid crystal display device used in lap-top type or notebook type personal computers. The backlight portion comprises one elongated light source 1 and a light guide plate 2 which is provided with an optical scattering layer 3 from which light is scattered. A reflection sheet 4 that causes the light to reflect and a diffusion sheet 5 that passes and illuminates the whole surface with a uniform brightness are provided underneath side of the light guide and over the surface of the light guide respectively. As to the optical scattering layer 3, which is shown more detail in Fig. 3, it consists of a plurality of ink dots 8, formed of optical scattering materials, arranged on the surface of light guide 2 (col. 1, lines 64-67). As the distance increase from the light source 1, the optical intensity from the light source 1 is reduced.

Therefore, as the distance increases from the light source 1, as shown in Fig. 3, the area of the ink dots 8 is increases (col. 2 lines 1-4). Since the prior art is implemented in portable type personal computers having a liquid crystal cell arrays of the active matrix driving type, as known in the art, the light source is, most of the time, to be disposed on the left side of the LCD panel where the gate signal input portion is located. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to dispose the light source of Taniguchi's backlight portion on the side of the gate signal input portion of Kuroha's LCD panel such that luminance of light of the backlight portion becomes lower as the distance from the gate input portion becomes larger so as to obtain a high image luminance and a high image display quality.

***Claim R ejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

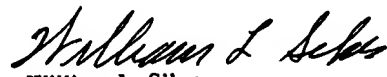
6. Claims 8 and 14 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 8 and 14 are dependent on claims 2 and 9 and are directed to Figs. 1A and 1B. As apparent to Figs. 1A and 1B, the luminance of backlight by the backlight portion is constant as the distance from the gate signal input portion 2 becomes larger (from left to right), not being lower as the distance becomes larger as recited in claims 2 and 9.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Claims 8 and 14 are neither allowed or rejected over prior art since the scope of those claims is unclear as indicated above. Any inquiry concerning this communication should be directed to Thoi V. Duong at telephone number (703) 308-3171.

Thoi Duong

01/04/2002

  
William L. Sikes  
Supervisory Patent Examiner  
Technology Center 2800